



How to Do Business with NASA

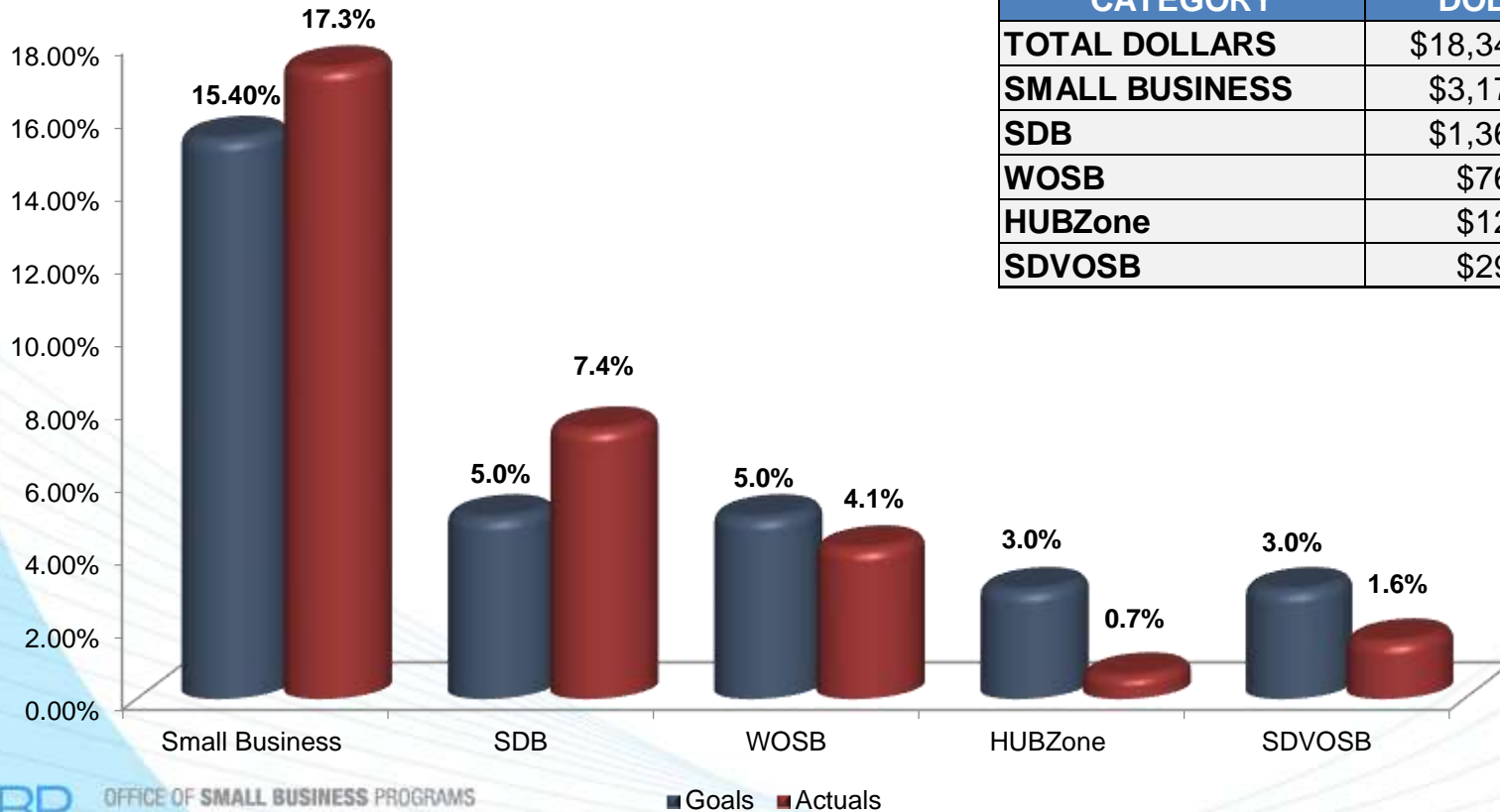
Glenn A. Delgado, Associate Administrator
NASA Office of Small Business Programs

February 9, 2021



NASA Agency September FY20 Prime Goals vs. Actual Percentages

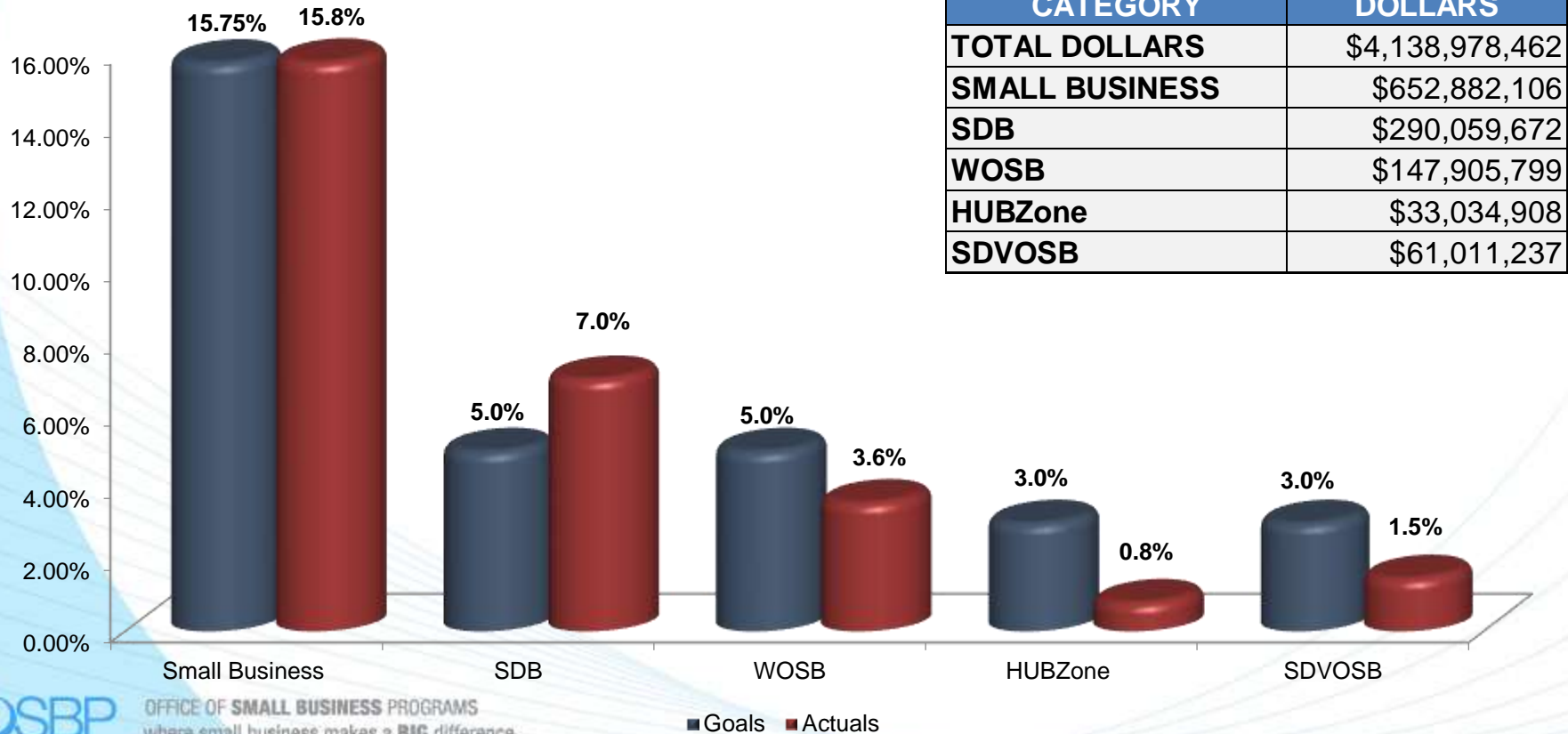
Data generated November 16, 2020 from BETA.SAM.GOV



CATEGORY	DOLLARS
TOTAL DOLLARS	\$18,342,749,820
SMALL BUSINESS	\$3,179,474,265
SDB	\$1,360,089,585
WOSB	\$760,664,342
HUBZone	\$120,026,964
SDVOSB	\$291,674,979

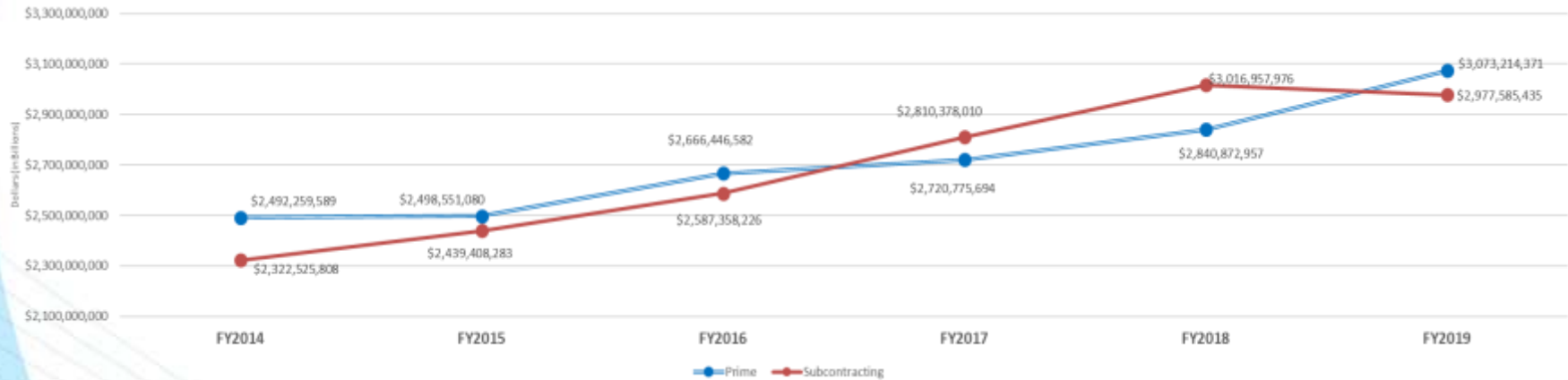
NASA Agency January FY21 Prime Goals vs. Actual Percentages

Data generated February 4, 2021 from BETA.SAM.GOV



FY14-FY19 Small Business Prime and Subcontracting Dollars Trend Analysis

FY19 Prime Data generated November 13, 2019 from FPDS-NG
FY19 Subcontracting Data generated March 23, 2020 from eSRS



	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	Δ FY14-FY19 %	Δ FY14-FY19 \$
Prime	\$2,492,259,589	\$2,498,551,080	\$2,666,446,582	\$2,720,775,694	\$2,840,872,957	\$3,073,214,371	23%	\$580,954,782
Subcontracting	\$2,322,525,808	\$2,439,408,283	\$2,587,358,226	\$2,810,378,010	\$3,016,957,976	\$2,977,585,435	28%	\$655,059,627
Total SB	\$4,814,785,397	\$4,937,959,363	\$5,253,804,808	\$5,531,153,704	\$5,857,830,933	\$6,050,799,806	26%	\$1,236,014,409
Total Spend	\$13,597,154,582	\$14,417,976,809	\$15,993,717,656	\$16,489,553,702	\$17,045,387,176	\$17,666,905,370	30%	\$4,069,750,788
							Δ FY18-FY19 %	Δ FY18-FY19 \$
						Prime	8%	\$232,341,414
						Subcontracting	-1%	-\$39,372,541
						Total SB	3%	\$192,968,873

TOP 20

NAICS

Total Dollars
FY 2020



OFFICE OF **SMALL BUSINESS** PROGRAMS
...where small business makes a **BIG** difference

SIX-DIGIT NAICS CODE WITH DESCRIPTION		TOTAL DOLLARS
541710/ 541712/ 541715	Research and Development in the Physical, Engineering, and Life Sciences (Except Nanotechnology and Biotechnology)	\$9,419,152,386
336414	Guided Missile and Space Vehicle Manufacturing	\$2,437,019,689
481212	Nonscheduled Chartered Freight Air Transportation	\$1,465,722,422
541330	Engineering Services	\$893,829,246
561210	Facilities Support Services	\$664,911,336
541512	Computer Systems Design Services	\$617,896,287
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	\$452,298,275
517919	All Other Telecommunications	\$254,517,928
561110	Office Administrative Services	\$196,825,135
541519	Other Computer Related Services	\$169,269,769
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	\$167,410,305
541513	Computer Facilities Management Services	\$164,627,422
236210	Industrial Building Construction	\$160,187,538
541611	Administrative Management and General Management Consulting Services	\$155,835,209
333314	Optical Instrument and Lens Manufacturing	\$149,988,071
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	\$146,137,343
561612	Security Guards and Patrol Services	\$114,891,386
336411	Aircraft Manufacturing	\$100,571,643
236220	Commercial and Institutional Building Construction	\$90,069,258
488190	Other Support Activities for Air Transportation	\$77,910,863
TOTAL		\$17,899,071,509

TOP 20

NASA PRIME CONTRACTORS

FY 2020

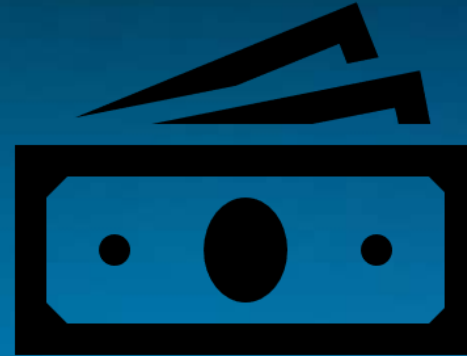


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...where small business makes a **BIG** difference

VENDOR NAME AND WEBSITE		TOTAL DOLLARS
California Institute of Technology (JPL)	https://acquisitions.jpl.nasa.gov	\$2,814,488,510
The Boeing Company	http://www.boeingsuppliers.com/esd/getstart.html	\$1,484,105,650
Lockheed Martin Corp.	https://www.lockheedmartin.com/en-us/suppliers.html	\$1,397,590,743
Northrop Grumman	https://www.northropgrumman.com/suppliers	\$1,359,827,527
Jacobs Technology, Inc.	https://www.jacobs.com/client-advocate#Suppliers	\$1,060,566,999
Space Exploration Technologies Corp.	https://www.spacex.com	\$847,990,951
KBR, Inc. (includes Wyle & SGT)	https://kbr.com/en/contact-us	\$650,213,921
Aerojet Rocketdyne, Inc.	https://www.rocket.com/supplernet	\$502,554,463
Science Applications International Corporation (SAIC)	https://www.saic.com/suppliers	\$495,196,146
Leidos (includes Dynetics)	https://www.leidos.com/suppliers	\$401,101,998
Sierra Nevada Corporation	https://www.sncorp.com/suppliers	\$344,728,532
United Launch Services, LLC	http://www.ulalaunch.com	\$275,796,019
Science Systems and Applications, Inc. (SSAI)	https://www.ssaihq.com	\$272,773,396
Johns Hopkins University	https://hopkinsmedicine.org/business/index.html	\$257,391,750
ASRC Federal, Inc.	https://asrcfederal.com/contract-vehicles#	\$256,159,525
Blue Origin Federation, LLC	https://www.blueorigin.com/fly-with-us/become-a-supplier	\$230,164,399
Syncom Space Services, LLC	http://www.syncomspaceservices.com/vendors.aspx	\$197,354,994
Peraton, Inc.	https://www.peraton.com/supplier-diversity	\$156,048,832
Maxar (includes Space Systems Loral)	https://www.maxar.com/legal/suppliers	\$154,882,785
Raytheon Company	https://www.rtx.com/suppliers	\$144,183,569
TOTAL		\$13,303,120,710

Relevance of Subcontracting at NASA

- Opportunities to build:
 - Past performance
 - Relationships
 - Technical skills



\$3B

NASA's Large Primes
have awarded
approximately **\$3
BILLION** a year to
Subcontractors.

Small Business Procurement Scorecard Achievement

- **FY 2019 – A (107.22%)**
- **FY 2018 – A (103.10%)**
- **FY 2017 – A (105.64%)**



Do Your Homework!

- **Start** with a Small Business Specialist (SBS) at each NASA Center
 - Build relationships with the Center SBS and the Industry Small Business Liaison Office (SBLO)
- Learn about NASA 's various missions
 - Each NASA Center has different Missions
 - Varied mix of products and services
- Respond to Sources Sought Synopses / Request for Information
- Use Small Business resources:
 - Agency Acquisition Forecast
 - Procurement Technical Assistance Center (PTAC)
 - Small Business Administration (SBA)
 - Trade associations
 - Outreach Events

NASA Small Business Specialists

Center Category	Center	Name	Phone	Email
RESEARCH CENTERS	Ames Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Armstrong Flight Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Glenn Research Center	Eunice J. Adams-Sipp	216-433-6644	Grc-smallbusiness@mail.nasa.gov
	Langley Research Center	Robert O. Betts	757-864-6074	Larc-smallbusiness@mail.nasa.gov
SPACE CENTERS	Johnson Space Center	Robert E. Watts	281-244-5811	Jsc-smallbusiness@mail.nasa.gov
	Kennedy Space Center	Joyce C. McDowell	321-867-3437	Ksc-smallbusiness@mail.nasa.gov
	Marshall Space Flight Center	David E. Brock	256-544-0267	Msfc-smallbusiness@mail.nasa.gov
	Stennis Space Center	Kay S. Doane	228-688-1720	Ssc-smallbusiness@mail.nasa.gov
SCIENCE CENTER	Goddard Space Flight Center	Jennifer D. Perez	301-286-4379	Gsfc-smallbusiness@mail.nasa.gov
FEDERALLY FUNDED R&D CENTER	Jet Propulsion Laboratory	Charles E. Bray, Jr.	818-354-5620	smallbusiness.programsoffice@jpl.nasa.gov
AGENCY-WIDE RESOURCE CENTER	NASA Shared Services Center	Troy E. Miller	228-813-6558	nssc-smallbusiness@mail.nasa.gov

Active Contract Listing (ACLs)

NASA ENVIRONMENTAL REMEDIATION/CONSULTING CONTRACTS						
CENTER	NAICS	CONTRACT NAME	CONTRACTOR NAME CONTRACT #	TYPE OF COMPETITION	POTENTIAL VALUE	ULTIMATE CONTRACT END DATE
AFRC	541690	Safety and Environmental On-site Support Services	MeCX, Inc. NND16SH03C	SDVOSB	\$14 M	6/30/2021
JSC/WSTF	562910	Environmental Compliance and Operations (ECO)	Navarro Research and Engineering, Inc. NNJ13HA03B	SB Set-Aside	\$80 M	12/31/2020 Last Date to Order
JSC/WSTF	562910	Environmental Compliance and Operations 2 (ECO2)	Navarro Research and Engineering, Inc. 80JSC018D0006	SB Set-Aside	\$80 M	05/31/2023 Last Date to Order
JSC	541620	JSC Environmental Services Team (JEST)	Straughan Environmental 80JSC018A0012	SB Set-Aside Single-Award BPA under GSA Schedule	\$11.8 M	8/31/2020 Last Date to Order
GSFC	541620	Environmental Compliance Services (ECS) Follow-on	Applied Sciences and Information Systems, Inc. NNG16AZ05C	Competitive 8(a)	\$22 M	1/31/2021
KSC	541620	Kennedy Environmental and Medical Services Contract (KEMCON)	Integrated Mission Support Services NNK16OB01C	SB Set-Aside	\$104 M	9/30/2020
KSC	541620	Architectural/Engineering Professional Environmental Remediation Services	AECOM Technical Services, Inc. 80KSC019D0010 Tetra Tech, Inc. 80KSC019D0011 Hydrogeologic, Inc. 80KSC019D0012	Full & Open	\$300 M	1/31/2024 Last Date to Order
LARC	541620	Environmental Support Services	HSG, LLC d/b/a Herndon Solutions Group 80LARC17C0005	WOSB Set-Aside	\$8.3 M	9/30/2022 Last Date to Order
MSFC	541620	Office of Center Operations Santa Susana Field Laboratory (SSFL)	The Boeing Company NNM15AA03C	Sole Source	\$5.6 M	6/30/2020
NSSC	562910	Data Management Services of the KSC Remediation Information System (RIS)	Tetra Tech, Inc. 80NSSC19P1227	Full & Open	\$152 K	7/28/2020



National Aeronautics and Space Administration

Virtual NASA HBCU/MSI
Engagement Workshop at CIAA

The NASA Minority University Research and Education Project (MUREP) will host a virtual workshop during the Central Intercollegiate Athletic Association (CIAA) tournament for Historically Black Colleges and Universities (HBCUs) and Minority Serving Institutions (MSIs) seeking NASA funding opportunities.

Tuesday, February 23, 2021
2:00 - 4:00 pm EST

Register Today!

[CLICK HERE](#)

<https://www.nasa.gov/engage/hbcu/>

MUREP

<https://www.nasa.gov/>

CIAA

HOWARD-CHANGS EDUCATE EMPOWER
The Next Generation of Engineers

NASA HBCU/MSI Engagement Workshop at CIAA

For information and to register, click [here](#).

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Countdown to Success

Supplier Summit and STEM Experience



Virtual! COUNTDOWN TO SUCCESS
Supplier Summit
with Supplier Matchmaking Session
Wednesday, March 3, 2021
This virtual event is free but requires registration
Matchmaking Session Sign-up
<http://bit.ly/SupplierMatchmakingSummit>

The Bridge to Local, State, and Federal Opportunities

NASA
CHARLESTON COUNTY
SOUTH CAROLINA
South Carolina
Department of Commerce
Just right for business.
NASA SC Space
Grant Consortium

For more information, click [here](#).

OSBP Learning Series

Event Date	Description	Action
January 27, 2021	How to Do Business with NASA Langley Research Center Guest Speaker: Robert O. Betts, Small Business Specialist	Register
February 17, 2021	What to Know Before You Go: Countdown to Success Supplier Summit Charleston County Government	Register
March 17, 2021	How to Do Business with NASA Shared Services Center Guest Speaker: Troy E. Miller, Small Business Specialist	Register

- Monthly on 3rd Wednesday
- 1:00 – 2:30 pm ET
- FREE!
- Register:
<https://osbp.nasa.gov/knowledge-portal.html>

Connect with OSBP at www.osbp.nasa.gov
or smallbusiness@nasa.gov



OSBP
Website



OSBP
Learning
Series
Webinars



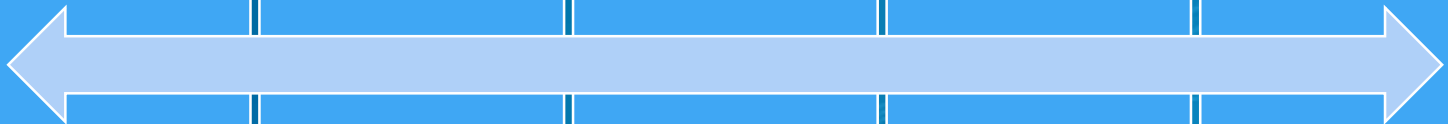
Small
Business
Outreach
Events



OSBP
Mobile
App



Social
Media





EXPLORE PROCUREMENT

The cornerstone of NASA's current and future missions
How to Do Business with NASA: Product Service Lines Overview
Department of the Navy

Ms. Julia Wise

Director

Procurement Management & Policy Division

Office of Procurement

February 9, 2021



NASA Office of Procurement Vision

Acquisition Excellence in an Evolving Environment

Explore and Execute Innovative, Effective, and Efficient Acquisition Business Solutions to Optimize Capabilities and Operations that enable NASA's mission.



NASA Office of Procurement (OP)

Enables the Agency's mission and execute contracts in support of programmatic, institutional, and operational needs



Headquarters OP - Provides stewardship of acquisition process to support successful accomplishment of mission objectives. Provide policy, oversight, optimization of procurement resources, and support Mission Directorate Acquisition Strategy Development to enable more efficient operations for NASA.



NASA Shared Services Center - Supports NASA's overall mission by providing core procurement services across the Agency; award /administration of grants and cooperative agreements; research & development contracts; complex, large dollar service contracts; and commercial item acquisitions.



NASA Management Office - NMO ensures proper coordination of all the required operational functions associated with the management of the FFRDC, the JPL contract, and is the focal point for communication with upper management at the JPL and actively represents NASA in local outreach and educational events.



Ames Research Center - Specializes in research geared toward gaining new knowledge and creating new technologies that span the spectrum of NASA interests.



Armstrong Flight Research Center - As the lead Center for flight research, Armstrong continues to innovate in aeronautics and space technology. The newest, the fastest, the highest -- all have made their debut in the vast, clear desert skies over Armstrong.



Glenn Research Center - Glenn develops and transfers critical technologies through research, technology development, and systems development for safe and reliable aeronautics, aerospace, and space applications.



Goddard Space Flight Center - Goddard's mission is to expand knowledge about Earth and its environment, the solar system, and the universe through observations from space.



Johnson Space Center - Leads NASA's efforts in human space exploration, from the early Gemini, Apollo, Skylab and space shuttle programs to today's International Space Station and Orion programs.



Kennedy Space Center - Kennedy is "America's Gateway to the Universe" -- leading the world in preparing and launching missions around Earth and beyond.



Langley Research Center - Langley continues to forge new frontiers in aviation and space research for aerospace, atmospheric sciences, and technology commercialization to improve the way the world lives.



Marshall Space Flight Center - Marshall is the world's leader in the access to space and the use of space for research and development to benefit humanity.



Stennis Space Center - Stennis is responsible for NASA's rocket propulsion testing and for partnering with industry to develop and implement remote-sensing technology.

NASA spends approximately 85% of its budget on acquiring goods and services. FY20 Procurement spend was \$18.9 billion; completed approximately 25K procurement actions (e.g. awards, modifications; not including grants or cooperative agreements) and managed in excess of over 9K instruments (e.g. contracts, PO, TO, DO & BPAs)

Enterprise Delivery Model



Product Service Lines (PSL):

- ✓ A defined categorization of recurring institutional (e.g. construction, financial services, etc.) and Program/Project Specific requirements (i.e. Aircraft Operations, Engineering, Propellants, Safety & Mission Assurance & Tech Transfer).

Why this approach:

- ✓ Promotes Category Management
- ✓ Allows for development of procurement, technical and industry expertise (e.g. Supply Chain Management)
- ✓ Leverage best practices and capabilities across the enterprise
- ✓ Meet federal mandates (Spend Under Management, utilization of Best in Class Contracts)

Benefits:

- ✓ Enables enterprise management of the PSL's (e.g. spend, service levels)
- ✓ Improves Spend Under Management
- ✓ Eliminates unnecessary contract redundancies
- ✓ Maximizes Small Business opportunities
- ✓ Improves industry access to opportunities

Governance for Product Service Lines (PSLs)



Continuous communication between PPM and ERM to ensure successful execution of this NEW Enterprise Procurement Strategy

PPM's assess institutional requirements using the PSL Requirements Coordination Tool

ERM's communicate to COR community new operating model/strategic approach

ERM's analyze existing and future Agency requirements

ERM's partner with PPM to determine short- and long-term activities/milestones/schedules

ERM's coordinate strategy with appropriate Center officers and Agency CORs

Agency-level oversight of contracts to arrive at Enterprise Procurement Strategy for future needs

PPM's and PO's partner with ERM's to develop Enterprise Procurement Strategies

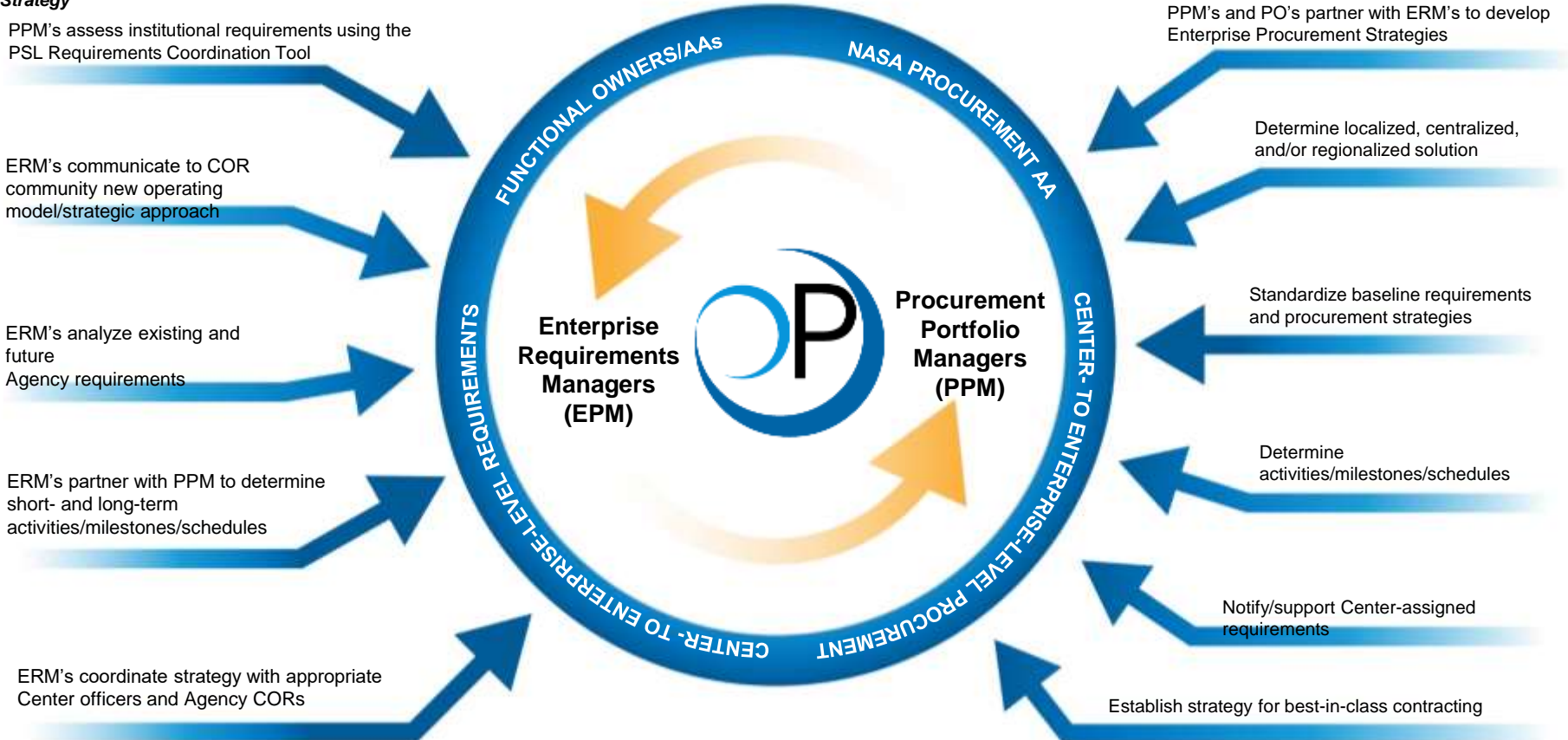
Determine localized, centralized, and/or regionalized solution

Standardize baseline requirements and procurement strategies

Determine activities/milestones/schedules

Notify/support Center-assigned requirements

Establish strategy for best-in-class contracting



Enterprise Delivery Model Transformation



CONOPS to implement a successful transition of Procurement Assignments

- ✓ A matrix procurement workforce that supports the buying office that is responsible for the Procurement Assignment
- ✓ May participate on SEB and administration may be performed locally (i.e. issue Task Orders on Enterprise Contracts)
- ✓ Local Center Leadership may contact local POs/Chiefs of Contracting for all Procurement inquiries

Governance

- ✓ Strategy for each PSL will be documented in [NASA FAR Supplement Appendix A](#)

Buying Office implementation of long-term strategies for each PSL

- ✓ Phased approach as strategies are developed considering existing contract off-ramps
- ✓ Each buying location identifies a PSL POC, Lead Contracting Officer (CO) responsible for PSL at the Buying Office (Procurement Assignment) Works closely with the PPMs and ERMs to complete a smooth handoff from the strategy development phase to the execution phase
- ✓ Works closely with one or more matrixed COs (including OSBP) from requiring Center to develop plan for the procurement and requirements development

Communicating the Change

- ✓ Ongoing communications with stakeholders
- ✓ POs ongoing communication with COs and entire workforce and local stakeholders
- ✓ Functional Owners / ERMs ongoing communication of PSL strategy with local technical requirement owners
- ✓ Develop outreach website to provide procurement entry points, roadmap of process, and guides (i.e. Doorway to Procurement)



Centralized IT Procurement Office



- ✓ **Reports to OP AA**
- ✓ **Centralized office with leadership and core staff hosted at GSFC**
- ✓ **Centralization:**
 - ✓ Achieve consistency in IT requirements and enable greater commonality in implementing IT solutions
 - ✓ Reduce duplication in IT contracting, leading to greater efficiencies
 - ✓ Provide consistent experience to Industry
- ✓ **Scope of IT Procurement Office: (Does not include P-Card, Software, Simplified Acquisition Threshold)**
 - ✓ Enterprise IT contracts/task orders currently at NSSC: NEST, NICS, EAST-2, WITS-3
 - ✓ IT Support Service contracts/orders and other institutional IT contracts at all Centers
 - ✓ Solutions for Enterprise-wide Procurement Master Contracts (SEWP)
 - ✓ Continue to identify and assess other IT procurements
- ✓ **Incremental approach, based on contract end dates, staffing availability, etc.**
 - ✓ Ongoing IT procurements will continue to be coordinated with PPM/ERM and the OCIO
 - ✓ Enabling the transition, Enterprise IT contracts will continue to be staffed by NSSC and local Procurement offices

NASA FAR Supplement Appendix A: Researching PSL's



✓ Click on the link ([NASA FAR Supplement Appendix A](#))

✓ Search “Appendix A”

✓ Scroll down to the bottom

✓ Review PSLs listings

APPENDIX	
Appendix A	Enterprise Procurement Strategies
Appendix B	Contract Closeout Procedures
A-102	Enterprise Procurement Strategies.
A-102.1	Acquisition of helium, hydrogen, nitrogen, oxygen, other propellants and aerospace fluids.
A-102.2	Information Technology Services.
A-102.3	Protective Services.
A-102.4	Acquisition Support Services.
A-102.5	Subscription Purchases.
A-102.6	Human Capital Services.
A-102.7	Aircraft Operational Support Services.
A-102.8	Financial Support Services.
A-102.9	Project Planning and Control Services.
A-102.10	Custodial Services.
A-102.11	Grounds Maintenance Services.
A-102.12	Logistics Services.
A-102.13	Construction.
A-102.14	Architect-Engineering Services Not Associated with Environmental Remediation.
A-102.15	Environmental Remediation and Associated Architect-Engineering Services.
A-102.16	Environmental Compliance and Associated Operations and Maintenance.

- ✓ Example: Information Technology Services

- ✓ SEWP V

- ✓ Top FY2020 IT Contract Vehicle
- ✓ Likely to remain top for FY2021
- ✓ Source: Bloomberg Government

This Is IT: SEWP V is the Top IT Vehicle in Fiscal 2020

By Laura Ortolano / January 28, 2021 03:01PM ET / Bloomberg Government

It's not easy to knock out the champ, in this case Schedule IT-70. It had been the top information technology contract for more than a decade, but not anymore. NASA's Solutions for Enterprise Wide Procurement V (SEWP V) became the [top information technology contract vehicle](#) in fiscal 2020. SEWP V will likely remain the top vehicle in fiscal 2021.

A-102.2 Information Technology Services.

(a) Buying Location. The TBD OP is the buying location for information technology (IT) services.

(b) The following contracts are mandatory use contracts:

- (1) 80NSSC19D0001 – NASA Enterprise Services & Technologies (NEST);
- (2) NNX16MB01C – NASA Enterprise Application Service Technologies 2 (EAST 2); and
- (3) NNM11AA04C – NASA Integrated Communications Services (NICS).

(c) If contracting officers are unable to satisfy requirements for IT supplies and services from the mandatory use contracts listed in paragraph (b), contracting officers shall satisfy IT requirements through the mandatory sources listed below in descending order of priority:

- (1) NASA Solutions for Enterprise-Wide Procurement (SEWP);
- (2) GSA Best-in-Class (BIC) Solutions; or
- (3) GSA Schedule Contracts.

Transformation: Benefits to Industry



- ✓ Standardization and Focus on delivering a common Procurement Experience (internal and external)
- ✓ Consistent Solicitations and Contracts
- ✓ More efficient procurement process over time (Reduce Procurement Lead Time to include proposal development)
- ✓ Standardize procurement policy that is clear, required and easily implemented Agency-wide
- ✓ Create Procurement policies that promote the utilization of streamline acquisition practices (e.g. PPTO, FAR Part 12 v/s Part 15)
- ✓ Improve the Agency Acquisition Forecast
- ✓ Standardization of vendor communication engagements
- ✓ Maximize Small Business and HBCU/MSI utilization, strategic partnerships, and Increase Agency's Industrial Base

Vendor Engagement Tools & Techniques



Go to NASA's [Doing Business with NASA](#) page and click on every link.

✓ NASA Acquisition Forecast

- Identifies all known contract opportunities in excess of the SAT, including new or revised acquisitions resulting from the transformation activities

✓ Draft Request for Proposals

- NFS requirement to issue DRFPs for all competitive negotiated acquisitions +\$10M

✓ Requirements Personnel

- NASA highly encourages vendor communication with requirements personnel up until issuance of the final RFP
- When appropriate, agency-wide blackout notices are issued after final RFP release directing NASA personnel to refrain from communicating with potential offerors and to refer all inquiries to the contracting officer

✓ Debriefings

- Comprehensive with an in-person preference
- Redacted Source Selection Statement and Source Selection Authority presentation package are provided/posted



THANK YOU

BUILDING ADDRESS

300 E Street, SW, Washington, DC, 20546

WEBSITE

<https://www.nasa.gov/office/procurement>

EMAIL

julia.b.wise@nasa.gov



National Aeronautics and
Space Administration



NASA Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) Program Overview

Space Technology Mission Directorate (STMD)

Bob Jones | February 9, 2021
HQ NMO JPL SBIR Program Manager



SBIR · STTR
America's Seed Fund™
POWERED BY NASA

The SBIR and STTR Programs

Small Business Innovation Research (SBIR)

- A set-aside program for small business to engage in Federal R&D with potential for commercialization
- Currently, 3.2% of Federal agencies Extramural R&D budgets >\$100M per year

Small Business Technology Transfer (STTR)

- A sister set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions (Ris) with potential for commercialization
- Currently, 0.45% of the extramural research budget for all agencies with a budget >\$1B per year

SBIR + STTR Programs



Department of
Defense (DoD)



Department of
Health and
Human Services
(HHS)



Department of
Energy (DoE)



National Aeronautics
and Space
Administration
(NASA)



National Science
Foundation (NSF)

SBIR Program Only



Department of
Agriculture
(USDA)



Department of
Education (DoEd)



Department of
Transportation (DoT)



Environmental
Protection
Agency (EPA)



Department of
Homeland Security
(DHS)



Department of
Commerce
(DoC)



NASA SBIR/STTR MISSION

Create opportunities through SBIR/STTR awards to leverage small business knowledge and technology development for maximum impact and contribution



NASA SBIR/STTR VISION

Empower small businesses to deliver technological innovation that contributes to NASA's missions, provides societal benefit, and grows the U.S. economy



NASA SBIR/STTR Program

As a program under the Space Technology Mission Directorate, the NASA SBIR/STTR program funds the research, development, and demonstration of innovative technologies that fulfill NASA needs, including those needed for the **Artemis** mission.



NASA's SBIR/STTR program has **awarded more than \$3.75 billion** to research-intensive American small businesses



Engineers and scientists from **more than 12,000** small businesses in all 50 States, DC and Puerto Rico have participated

NASA SBIR/STTR Opportunities

NASA SBIR/STTR PHASES





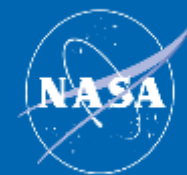
Recent Program Awards

NASA SBIR 2019 Phase II Awards

- 5 May 2020, NASA awarded \$104 Million to US Small Businesses for space technology development
- Selected 139 proposals from 124 U.S. small businesses from 31 states and the District of Columbia to receive Phase II contracts
- These proposals support NASA's future space exploration missions, while also benefiting the U.S. economy

NASA SBIR/STTR 2020 Phase I Awards

- 30 June 2020, NASA Invests \$51 Million in Innovative Ideas from US Small Businesses
- Awarded 312 small businesses and RIs from 44 states a total of \$51 million in Phase I contracts
- Will help advance the types of capabilities needed for future missions, including our efforts to send American astronauts to the Moon, and then on to Mars, while also providing a long-term boost to the U.S. economy.

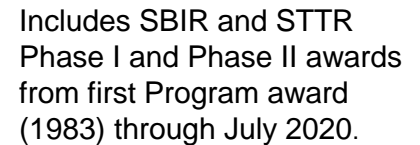


FY20 Awards/Investment Summary (Sept. 2020)

Annual Awards Budget: ~ \$211 million

Program	# of Selections	\$ Value
SBIR 2020 Phase I (June 2020)	351	\$43,791,521
STTR 2020 Phase I (June 2020)	58	\$7,237,780
STTR 2018 Phase II (November 2019)	21	\$15,767,512
SBIR 2019 Phase II (May 2020)	140	\$104,516,157
I-Corps (August 2020)	27	\$267,895
Phase II-E	43	\$11,709,392
CCRPP	8	\$6,760,723
Sequentials (July 2020)	4	\$21,283,808
TOTAL SBIR/STTR Funding:	652	\$211,334,788

SBIR is = to 3.2% of extramural R&D | STTR is = to 0.45% of extramural R&D





Why Participate in SBIR/STTR?

For the Small Businesses

- Develop working relationship & credibility with government R&D
- Fosters partnerships with large corporations and academia
- Provides recognition and visibility for the business
- Participation attracts venture capital and other funding sources

For STTR: Opportunity to leverage expertise and innovative ideas from professors/research staff/students

- Opportunity to leverage specialized facilities and experimental equipment at the RIs when often small businesses may not be able to afford such facilities on their own
- Opportunity to create pipeline of usable talent for company from the RIs

For the Research Institutions

- Opportunity to create/inspire entrepreneurship as a vital part of the educational experience
- Another opportunity to access federal funding for research
- An opportunity sometimes to get RI Intellectual Property (IP) involved in the project and licensed
- Another means for visibility in the research community, generate peer-reviewed pubs., etc.

Intellectual Property

Patent Rights

Small business concerns normally retain the principal worldwide patent rights to any invention developed with Government support

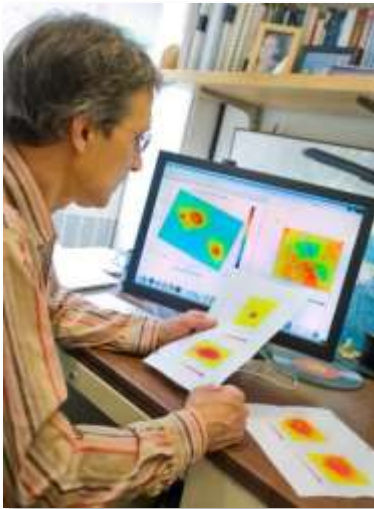
Government Use

The Federal Government receives a royalty-free license for Federal Government use



U.S. Patent and Trade Office
<http://www.uspto.gov/>

Data Protection



Protection Period

Data generated from your R/R&D is protected from public disclosure for no less than 20 years from award date (Phase I, Phase II, or federally funded Phase III)

Government Use

The Government retains a royalty-free license for Government use of any technical data delivered under an SBIR award, whether patented or not



National Science Foundation (NSF) Space Topic

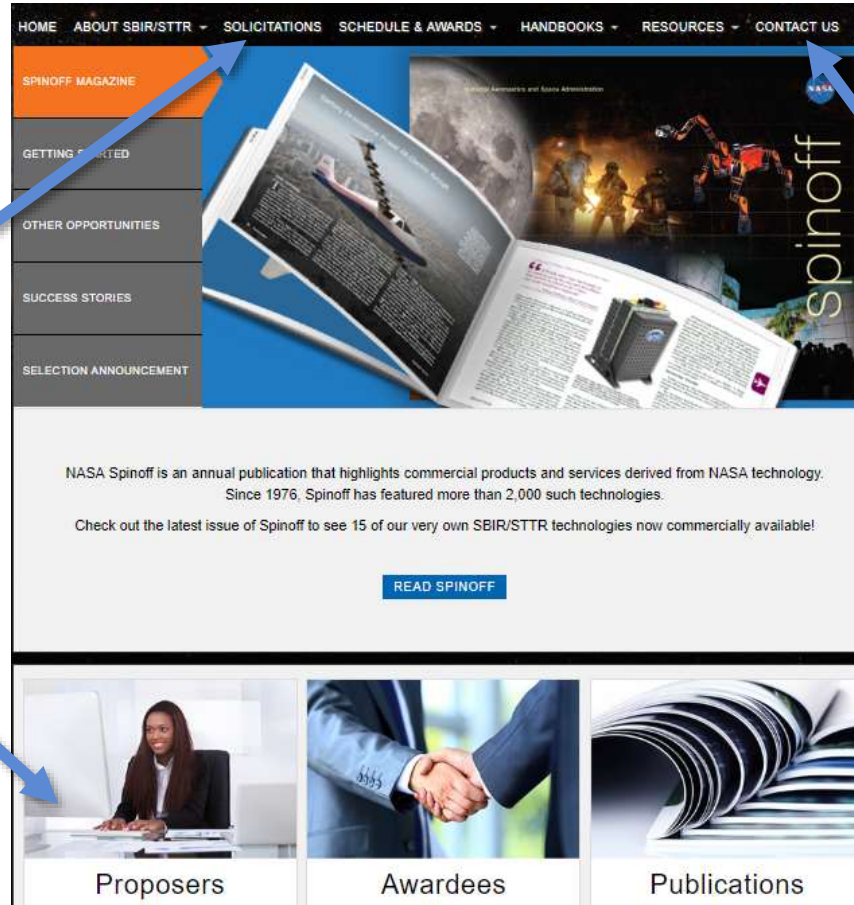
NSF Space Topic

- NSF is including a Space topic in its SBIR/STTR Program
- Given different program goals and criteria, it's likely that one agency would be a much better fit for any specific project.
- Learn more about the differences between the NSF SBIR/STTR and NASA SBIR/STTR Programs at:

<https://sbir.gsfc.nasa.gov/content/nsf-sbirsttr-space-topic-what-you-need-know>



Program Website | sbir.nasa.gov



Research NASA's Needs
Annual Solicitations including past years

Contact the Program
SBIR/STTR Helpdesk
and Program Points of
Contact

Looking to Join the Program?

- Program Basics
- Forms Library
- Model Contract
- In-depth Training Resources and FAQs



Learning About NASA's Needs

Focus Areas

NASA's research subtopics are organized by "Focus Areas" that group interests and related technologies.

- **Identify** the Area(s) closest to your innovation/idea
- **Go** to our website to research
- **Prepare to write** a proposal tailored to NASA's needs

<https://sbir.nasa.gov/solicitations>

2020 Focus Areas (FA)	
FA 1: In-Space Propulsion Technologies	FA 13: Information Technologies for Science Data
FA 2: Power Energy and Storage	FA 14: On-orbit Servicing, Assembly, and Manufacturing (OSAM)
FA 3: Autonomous Systems for Space Exploration	FA 15: Materials, Materials Research, Structures, and Assembly
FA 4: Robotic Systems for Space Exploration	FA 16: Ground and Launch Processing
FA 5: Communications and Navigation	FA 17: Thermal Management Systems
FA 6: Life Support and Habitation Systems	FA 18: Air Vehicle Technology
FA 7: Human Research and Health Maintenance	FA 19: Integrated Flight Systems
FA 8: In-Situ Resource Utilization	FA 20: Airspace Operations and Safety
FA 9: Sensors, Detectors and Instruments	FA 21: Small Spacecraft Technologies
FA 10: Advanced Telescope Technologies	FA 22: Low Earth Orbit Platform Utilization and Microgravity Research
FA 11: Spacecraft and Platform Subsystems	FA 23: Digital Transformation for Aerospace
FA 12: Entry, Descent and Landing Systems	FA 24: Dust Mitigation

Submission Checklist

- Submit proposal prior to the deadline
- Make sure you meet the format requirements (margin and font size, page limitation)
- Make sure you as Small Business Concern register correctly
 - Create an account in the Proposal Submission EHB, follow the instructions.
- For STTR proposals the RI needs to endorse the Research Agreement prior to the proposal being complete and submitted. The RI will need to:



- Register under the firm using its EIN, State, and PIN so the RI is attached to the proposal correctly
- Choose the RI option at the bottom of the page when entering your name, email, phone, etc.
- Perform the “Endorse Proposal” step, which is the final step in the submissions process

Success Stories: STMD



3D Printing in Zero Gravity at the International Space Station

POST- AWARD SUCCESS: \$73.7M from NASA for OSAM-2

MADE IN SPACE – Moffett Field, CA

SNAPSHOT: Made In Space developed the first Additive Manufacturing Facility on the ISS in 2015 with funding in part from SBIR awards. The company has since received a \$73.7 million contract from NASA to develop and demonstrate On-Orbit Servicing, Manufacturing and Assembly 2 (OSAM-2) also known as Archinaut.

Lightweight Carbon Nanotube Technology for Building Spacecrafts

POST-AWARD SUCCESS: \$8.1M from NASA Game Changing Development

NANOCOMP TECHNOLOGIES, INC – Merrimack, NH

SNAPSHOT: Received Phase III funding from the NASA SBIR/STTR program for the continued improvement of lightweight Miralon™ carbon nanotube technology to replace heavier materials on spacecraft. This technology was originally developed under Air Force and received Phase III funding per NASA's needs.

Success Stories: SMD



Deformable Mirrors for Telescopes

**PHASE III SUCCESS: \$875K from NASA;
\$2M revenue annually**

IRIS AO, INC – Berkeley, CA

SNAPSHOT: Since the first exoplanet discovery in 1995, NASA has dedicated resources to develop deformable mirrors for telescopes to explore possible signs of life outside our solar system. IRIS AO's SBIR-funded products, such as their mirrors, are now commercially sold worldwide.

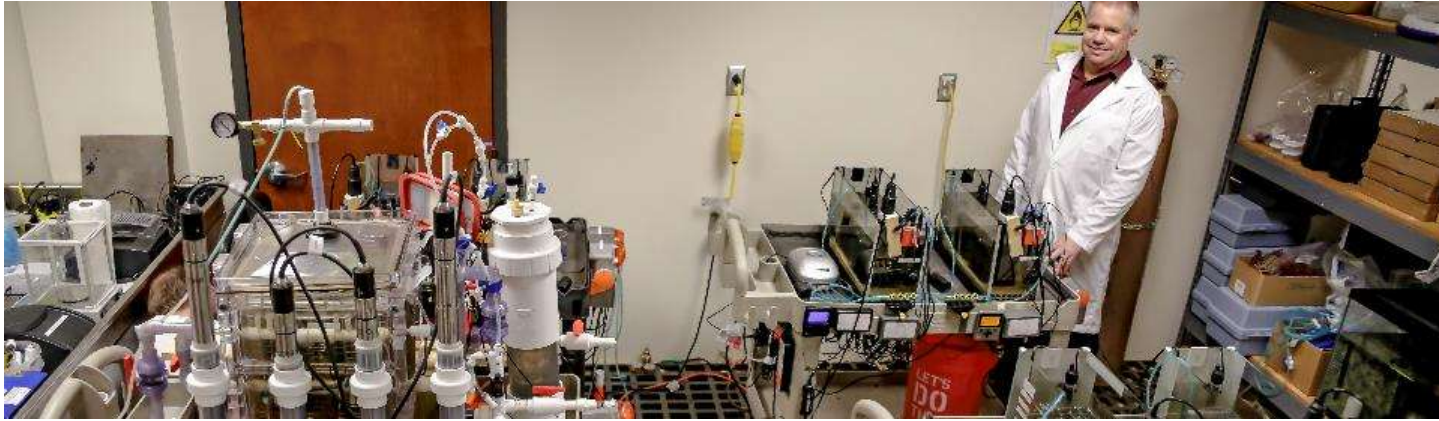
CubeSat Measuring First Ice Cloud Map for Climate Research

**PHASE III SUCCESS: \$45M in commercial sale of components
attributed to results of NASA SBIR funds**

VIRGINIA DIODES, INC – Charlottesville, VA

SNAPSHOT: VDI received NASA SBIR awards for research and development of terahertz wave technology. Their work led to NASA ESTO funding, resulting in the IceCube CubeSat, which captured the world's first ice cloud map contributing to our understanding of the Earth's climate

Success Stories: HEOMD



Space-based Biomanufacturing Facility for Vascular Grafts, Tissues, and Organs

POST-PHASE II SUCCESS: \$1.5M in CCRPP investment from the ISS National Lab

TECHSHOT – Greenville, IN

SNAPSHOT: Techshot developed a BioFabrication Facility (BFF) originally under DARPA, received a \$1.5M CCRPP from the NASA SBIR/STTR Program supported by the ISS National Lab. BFF the first-ever 3Dprinter capable of manufacturing human tissue in the microgravity condition of space.

Water Recycling System for Space Exploration

PHASE II SUCCESS: \$885K from NASA

PANCOPIA – Hampton, VA

SNAPSHOT: Up to 92% of the costs to sustain operations in space are for water. Pancopia is developing a water treatment that will save costs by recycling 95% of wastewater into drinking water by reverse osmosis. This treatment will be usable on the ISS and on Earth. Pancopia received a National Excellence in Technology Transfer Project Award for this technology.

Success Stories: ARMD



Advanced Unmanned Aerial Vehicles for Improved Communications

PHASE III SUCCESS: Up to \$6.9M from NASA & DHS

HIGHER GROUND, LLC – Palo Alto, CA

SNAPSHOT: Higher Ground, LLC is expanding the reach of UAVs to fly beyond the visual line of sight with developments including UAV tracking, even in network-deficient areas, and enabling UAVs to detect and avoid oncoming traffic; working with the NASA SBIR Program resulted in additional work with DHS to enhance response functions of UAVs.

SCEPTOR Distributed Electric Propulsion Aircraft

PHASE III SUCCESS: \$8M from NASA

EMPIRICAL SYSTEMS AEROSPACE, INC – Pismo Beach, CA

SNAPSHOT: California-based ESAero has a rich history with NASA SBIR program and has tied together several Phase I and II projects to deliver a new suite of electric aircraft propulsion system designs and tools to its government clients.

Questions?

Visit our Website
www.SBIR.NASA.gov

Sign up for our Newsletter
<https://sbir.nasa.gov/info>

Contact the Help Desk
301.937.0888

